

FAST ACQUISITION OF TRAFFIC CHANNELS FOR A HIGHLY VARIABLE
DATA RATE REVERSE LINK OF A CDMA WIRELESS COMMUNICATION
SYSTEM

ABSTRACT OF THE DISCLOSURE

5 A service option overlay for a CDMA wireless communication in which
multiple allocatable subchannels are defined on a reverse link by assigning different
code phases of a given long pseudonoise (PN) code to each subchannel. The
instantaneous bandwidth needs of each on-line subscriber unit are then met by
dynamically allocating none, one, or multiple subchannels on an as needed basis for
10 each network layer connection. The system efficiently provides a relatively large
number of virtual physical connections between the subscriber units and the base
stations on the reverse link for extended idle periods such as when computers connected
to the subscriber units are powered on, but not presently actively sending or receiving
data. These maintenance subchannels permit the base station and the subscriber units to
15 remain in phase and time synchronism. This in turn allows fast acquisition of additional
subchannels as needed by allocating new code phase subchannels. Preferably, the code
phases of the new channels are assigned according to a predetermined code phase
relationship with respect to the code phase of the corresponding maintenance
subchannel.